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EXAMINER

ASINOVSKY, OLGA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1711

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,295

Applicant(s)

UDDING ET AL

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. Claim 10 provides for the use of curable resin composition for the production of moulded parts or structural materials, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

3. Claim 11 provides for the use of resin composition in flooring, roofing or rock bolts, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper

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definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Meixner et al U.S. Patent 5,470,897 or Baum U.S. Patent 3,721,722.

The present invention is a curable resin composition based on an unsaturated prepolymer, a vinyl ether monomer that can be cross-linked with it and one or more other monomers, wherein a vinyl ether monomers are represented by the general formula (I) or (II), and wherein the unsaturated prepolymer has an acid number of less than 10 mg of KOH per g, and where the curing is effected with a radical-forming system.

Meixner discloses a radically curable coating composition comprising unsaturated polyester A) and a component B) containing vinyl ether groups, column 3, line 28. The component B) containing vinyl ether groups such as hydroxybutyl vinyl ether, triethylene glycol divinyl ether, 1,4-butandiol divinyl

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ether are readable in applicants' claims 1-4. The unsaturated polyester A) is unsaturated prepolymer in applicants' claims. The unsaturated polyesters have acid number of 0 to 50, column 3, lines 10-11. The coating composition is cured in the presence of hydroperoxides, column 4, lines 15, 19 and 31-40. Hydroperoxides are readable in applicants' claimed aid of a radical-forming system in the present claim 1. The component B) can include (meth)acrylic acid esters, column 3, lines 36-41. The (meth)acrylic acid esters are readable in applicants' claimed "one or more other monomers" in the present claims 1 and 9. The weight ratio of component A) to component B) is 50:50 to 95:5, column 3, lines 47-48, for the present claims 7-8. The curable composition is used for coating substrates, column 2, line 20.

Baum discloses unsaturated polyester resin that is cured by the vinyl copolymerization of the unsaturated polyester, a polymerizable vinyl ether monomer and a copolymerizable vinyl aryl monomer in the presence of a peroxide catalyst, column 2, lines 21-23. A polymerizable vinyl ether monomer represented by the formula (1) at column 2 is readable in applicants' claims.

Unsaturated polyester is readable as an unsaturated prepolymer in applicants' claims. Reference does not disclose the acid number of unsaturated polyester. However, the acid number of less than 10 mg of KOH per g is considered of being 0 in light of the term "less" in applicants' claims.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killilea et al U.S. Patent 5,777,024.

Claim 5 discloses the unsaturated prepolymer that is a (meth)acrylate-containing resin. Claim 6 discloses a (meth)acrylate-containing resin that is a vinyl ester urethane resin. Claims 5 and 6 are depending on claim 1. Claim 1 discloses a curable resin composition based on an unsaturated prepolymer, a vinyl ether monomer that can be cross-linked with it and one or more other monomers, wherein a vinyl ether monomers are represented by the general formula (I) or (II), and wherein the unsaturated prepolymer has an acid number of less than 10 mg of KOH per g, and where the curing is effected with a radical-forming system.

Killilea discloses an allophanate-modified urethane resin for producing a curable coating composition, column 7, lines 32-33. Allophanate-modified urethane resins are produced by reacting an allophanate-modified isocyanate with a hydroxy-functional olefinic compound, such as hydroxy-functional (meth)acrylate and/or vinyl ether, column

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2, and lines 34-37. The coating composition can include other urethane, epoxy, and/or polyester (meth)acrylate resins, column 2, lines 45. The vinyl ether compound having one hydroxyl group and one or more vinyl ether groups, column 5, lines 31-39, are readable in applicants' claim 3. The urethane resin having the structure at column 1, line 50, would be readable in applicants' claimed (meth)acrylate modified urethane resin in the present claims 5-6. The (meth)acrylate monomers can be present, column 8, lines 19-36. The coating composition can be thermally cured using a suitable initiator, column 10, and lines 23-44. The composition can be used for coating many types of surfaces, column 2, and lines 52-55.

The difference between the present claims and Killilea is the requirement in the present claims 5 and 6 that the unsaturated prepolymer should have an acid number of less than 10 mg of KOH per g. However, it would have been obvious to one of ordinary skill in the art to use the allophanate-modified urethane resin in Killilea because an acid number can be zero in light of the term "less" in the present claims, and, in the alternative, an allophanate-modified urethane resin in Killilea can be reacted with a hydroxy-functional (meth)acrylate, column 4, lines 50-67, for the purposes of obtaining the sufficient acid number, and, thereby, obtain the claimed requirement.

Information Disclosure Statement

8. The information disclosure statement (IDS) submitted on 12/19/01 has been considered by the examiner.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 703-308-0041. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Olga Asinovsky
Examiner
Art Unit 1711

O.A.
April 29, 2003


Supervisory Patent Examiner
Technology Center